

## **5 FAH-8 H-400 WEB SITE DESIGN AND DEVELOPMENT**

### **5 FAH-8 H-410 DEVELOPMENT AND TESTING**

*(CT:WEB-5; 06-21-2012)  
(Office of Origin: IRM/BMP/GRP/GP)  
(Updated only to revise Office of Origin)*

### **5 FAH-8 H-411 REQUIREMENTS, SPECIFICATIONS AND PLANNING**

*(CT:WEB-1; 09-29-2005)*

- a. Once the requirement for a Web site has been established, the initial planning should take these questions into account:
  - (1) Who is responsible for the site?
    - (a) For content, what office at post or bureau will be responsible for maintaining the content and style?
    - (b) For hardware, who will be responsible for keeping the equipment up and running?
  - (2) What will be posted there?
  - (3) How large should it be?
  - (4) Who is the intended audience?
  - (5) What will it look like?
  - (6) How will security issues be handled?
  - (7) What legal responsibilities (e.g., copyright, FOIA, Privacy Act) apply?

- (8) What legal responsibilities under Information Quality Act apply?
- (9) What needs to be done to conform to values of the community?
- b. The content should be planned to provide value to others in your community. Consider the cost (time) of following each and every link and make every page count.
- c. Scope - start small. It is better to publish a few excellent pages than a large quantity of partially completed pages. Gradually add material. Have a plan for future expansion but remember there is an increasing maintenance requirement.
- d. Audience - define one or more specific audiences and create material specifically targeted to these audiences. An embassy might define three audiences as American Citizens (AmCits), foreign nationals, and students.

## **5 FAH-8 H-412 DESIGN/PROTOTYPING**

*(CT:WEB-1; 09-29-2005)*

- a. A basic outline is the first step in organizing content on a Web site. What are your major categories or sections of information, your major headings? What are your subheadings? From that outline base, become more detailed, defining the information architecture (content organization) page by page with cross references. A content manager should work with the program manager to take the next step and make a diagram, or story board, interrelating all the content categories. Site layout is a critical factor to the site's success. Test the site layout and terms used on the site with people outside your office to development a baseline performance measure: can people understand the terms and site organization that you are using? Periodically retest as the site evolves.
- b. During the design phase, the following factors should be considered:
  - (1) Information architecture;
  - (2) Accessibility;
  - (3) Usability before launch;
  - (4) Templates;
  - (5) Footers and headers;

- (6) Fonts;
- (7) Graphics;
- (8) Sound and video;
- (9) Database;
- (10) Standard elements per the Federal Content Standards Guidelines;
- (11) Search capability; and
- (12) Performance measures.

## **5 FAH-8 H-413 PROGRAMMING**

*(CT:WEB-1; 09-29-2005)*

- a. Web pages must be created using HyperText Mark-up Language (HTML), Extensible HyperText Mark-up Language (XHTML), Extensible Mark-up Language (XML), or other markup language defined by the World Wide Web Consortium (W3C). Web pages may be created using appropriate scripting languages provided the final transmitted html code conforms to a W3C standard.
- b. Individual Web site pages should be created as separate modules to facilitate version control.

## **5 FAH-8 H-414 TESTING**

### **5 FAH-8 H-414.1 Unit Testing**

*(CT:WEB-1; 09-29-2005)*

Each page must be tested on the development network before it is integrated into the Web site. Individual tests should be run on all major browsers (Internet Explorer, Netscape Navigator, Mozilla, Firefox, Opera, etc.) appropriate to the target network to ensure all users will see the desired display. Testing should also consider the different operating systems (Mac, Windows, Linux) as the several browsers perform differently depending on operating system.

### **5 FAH-8 H-414.2 Integration Testing**

*(CT:WEB-1; 09-29-2005)*

As individual pages of the Web site are assembled, integration testing must be performed to ensure link and page interaction within the Web site is fully functional. Integration testing must be accomplished every time an individual page is modified or updated. Integration testing of internal links should be done on the development system. Because development systems must not have Internet connectivity, links that are external to the Web site must be tested immediately after installing the Web site on the production server.

## **5 FAH-8 H-415 DOCUMENTATION**

*(CT:WEB-1; 09-29-2005)*

Documentation is essential to records management. Web site documentation should include:

- (1) The requirements and specification documents;
- (2) Contract documents (design, hosting, etc.);
- (3) Instructions for modifying files on the Web server;
- (4) Content outline or information architecture, site map, story boards, etc.;
- (5) A description of the file structure identifying how the information architecture is implemented;
- (6) A list of points of contact for both content and operations;
- (7) The Continuity of Operations Plan (COOP) as it relates to the Web site;
- (8) Archive method and frequency and disposition schedule for content; and
- (9) Security measures.

## **5 FAH-8 H-416 IMPLEMENTATION**

### **5 FAH-8 H-416.1 Implementation Testing**

*(CT:WEB-1; 09-29-2005)*

Immediately on uploading of modified Web pages, additional testing must be performed to validate any links that could not be tested on the development network. If any errors are found, the original Web page must be reloaded until the errors are corrected.

## **5 FAH-8 H-416.2 Quality Assurance (QA)**

*(CT:WEB-1; 09-29-2005)*

- a. W3C maintains a QA Toolbox that Webmasters should use to validate their Web sites.
- b. Performance measurement is another way to determine the quality of a Web site. Viewer satisfaction can be assessed by a one-question survey asking for a rating from "1 – good" to "5 – poor". If done, this should be part of a formal performance measurement plan.

## **5 FAH-8 H-417 THROUGH H-419 UNASSIGNED**

*(CT:WEB-1; 09-29-2005)*